AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A method of feedback control of a laser, said method comprising:

outputting a laser beam from said laser to an optical bundle;

measuring an intensity of said laser beam ~~between said laser and said optical bundle~~ and outputting a raw feedback signal in response thereto;

determining a value of a laser calibration factor and an optical bundle calibration factor through a statistical sampling of a plurality of laser and optical bundle combinations, said laser calibration factor representing an attribute of said laser and an attribute of the coupling of said laser with a sample of optical bundles, said optical bundle calibration factor representing an attribute of said optical bundle and an attribute of the coupling of said optical bundle with a sample of lasers;

multiplying said raw feedback signal by ~~a~~ said laser calibration factor and ~~an~~ said optical bundle calibration factor and outputting an adjusted feedback signal; and

~~receiving said adjusted feedback signal and~~ controlling said laser in response to said adjusted feedback signal.

2. (Cancelled)

3. (Currently Amended) The method according to Claim ~~2~~ 1 wherein said determining the value of said laser calibration factor and said optical bundle calibration factor comprises:

measuring a response slope of said ~~sample~~ plurality of laser and optical bundle combinations; and

calculating said laser calibration factor and said optical bundle calibration factor in response to said response slope of said ~~sample~~ plurality of laser and optical bundle combinations.

4. (Currently Amended) A method of feedback control of a first laser, said first laser being operably coupled to an optical bundle, said method comprising:

outputting a laser beam from said first laser to said optical bundle;

measuring an intensity of said laser beam ~~between said first laser and said optical bundle~~ and outputting a raw feedback signal in response thereto;

determining a value of a laser calibration factor and ~~a~~ an optical bundle calibration factor through ~~testing~~ a statistical sampling of at least a second laser and at least a second optical bundle, said laser calibration factor representing an attribute of said first laser and an attribute of the coupling of said first laser with said second optical bundle, said optical bundle calibration factor representing an attribute of said optical bundle and an attribute of the coupling of said optical bundle with said second laser;

multiplying said raw feedback signal by said laser calibration factor and said optical bundle calibration factor and outputting an adjusted feedback signal; and

~~receiving said adjusted feedback signal and~~ controlling said first laser in response to said adjusted feedback signal.

5. (Original) The method according to Claim 4 wherein said determining said value of said laser calibration factor and said optical bundle calibration factor comprises:

measuring a response slope of said second laser and said second optical bundle; and

calculating said laser calibration factor and said optical bundle calibration factor in response to said response slope of said second laser and said second optical bundle.

6. (Currently Amended) A feedback control system for use with a plurality of laser sources and a plurality of optical bundles, one of said plurality of laser sources being operably coupled to one of said plurality of optical bundles for delivering a laser light output, said feedback control system comprising:

an optical sensor ~~connectable between said one of said plurality of laser sources and said one of said plurality of optical bundles, said optical sensor operable to output~~ outputting a raw feedback signal in response to a ~~measure~~ measured intensity of laser light output from said one of said plurality of laser sources;

a processing unit ~~operably coupled with said optical sensor for~~ receiving said raw feedback signal, said processing unit ~~operable to multiply~~ multiplying said raw feedback signal by a laser calibration factor and a bundle calibration factor to produce an adjusted feedback signal, said laser calibration factor and said bundle calibration factor being determined through a statistical sampling of a plurality of laser and optical bundle combinations, said laser calibration factor representing an attribute of said one of said plurality of laser sources and an attribute of the coupling of said one of said plurality of laser sources with said plurality of optical bundles, said optical bundle calibration factor representing an attribute of said one of said plurality of optical bundles and an attribute of the coupling of said one of said plurality of optical bundles with said plurality of laser sources; and

a controller ~~operably coupled with said processing unit for~~ receiving said adjusted feedback signal, said controller ~~being connectable~~ in communication with said one of said plurality of laser sources so as to control the output of said one of said plurality of laser sources in response to said adjusted feedback signal.

7. (Original) The feedback control system according to Claim 6 wherein said optical sensor is a photodiode.

8. (Cancelled)

9. (New) A method of feedback control of a laser system, said laser system comprising a laser and an optical bundle, said laser being operably coupled to said optical bundle, said method comprising:

measuring a response slope of a sample of laser and optical bundle combinations;

calculating a laser calibration factor and an optical bundle calibration factor based upon said response slope of said laser and optical bundle combinations;

outputting a laser beam from the laser to the optical bundle;

measuring an intensity of said laser beam; and

controlling said laser in response to said measured intensity of said laser beam, said laser calibration factor, and said optical bundle calibration factor.

10. (New) The method according to claim 9, wherein said measured intensity of said laser beam is measured between said laser and said optical bundle.

11. (New) The method according to claim 9, further comprising outputting a raw feedback signal in response to said measured intensity of said laser beam.

12. (New) The method according to claim 11, wherein said controlling said laser in response to said measured intensity of said laser beam, said laser calibration factor, and said optical bundle calibration factor comprises multiplying said raw feedback signal by said laser calibration factor and said optical bundle calibration factor to obtain an adjusted feedback signal.

13. (New) A feedback control system for use with a laser source and an optical bundle, said laser source being operably coupled to said optical bundle for delivering a laser light output, said feedback control system comprising:

an optical sensor outputting a raw feedback signal in response to a measured intensity of laser light output from said laser source;

a processing unit receiving said raw feedback signal from said optical sensor, said processing unit outputting an adjusted feedback signal based upon said raw feedback signal, a laser calibration factor, and a bundle calibration factor; and

a controller receiving said adjusted feedback signal, said controller being in communication with said laser source so as to control the output of said laser source in response to said feedback signal.

14. (New) The feedback control system according to claim 13 wherein said optical sensor is connected between said laser source and said optical bundle.

15. (New) The feedback control system according to claim 13 wherein said processing unit multiplies said raw feedback signal by said laser calibration factor and said bundle calibration factor to produce said adjusted feedback signal.

16. (New) The feedback control system according to Claim 13 wherein said optical sensor is a photodiode.

17. (New) The feedback control system according to Claim 13 wherein said laser calibration factor and said bundle calibration factor are determined through a statistical sampling.